



Early Journal Content on JSTOR, Free to Anyone in the World

This article is one of nearly 500,000 scholarly works digitized and made freely available to everyone in the world by JSTOR.

Known as the Early Journal Content, this set of works include research articles, news, letters, and other writings published in more than 200 of the oldest leading academic journals. The works date from the mid-seventeenth to the early twentieth centuries.

We encourage people to read and share the Early Journal Content openly and to tell others that this resource exists. People may post this content online or redistribute in any way for non-commercial purposes.

Read more about Early Journal Content at <http://about.jstor.org/participate-jstor/individuals/early-journal-content>.

JSTOR is a digital library of academic journals, books, and primary source objects. JSTOR helps people discover, use, and build upon a wide range of content through a powerful research and teaching platform, and preserves this content for future generations. JSTOR is part of ITHAKA, a not-for-profit organization that also includes Ithaka S+R and Portico. For more information about JSTOR, please contact support@jstor.org.

THE AMERICAN MATHEMATICAL MONTHLY

OFFICIAL JOURNAL OF THE MATHEMATICAL
ASSOCIATION OF AMERICA

DEVOTED TO THE INTERESTS OF COLLEGIATE MATHEMATICS

EDITED BY

RAYMOND CLARE ARCHIBALD, EDITOR-IN-CHIEF

WALLIE ABRAHAM HURWITZ

HERBERT ELLSWORTH SLAUGHT

WITH THE COÖPERATION OF

ALBERT A. BENNETT

CUTHBERT F. GUMMER

ULYSSES G. MITCHELL

EDWARD L. DODD

DERRICK N. LEHMER

ELTON J. MOULTON

OTTO DUNKEL

HENRY P. MANNING

DAVID EUGENE SMITH

BENJAMIN F. FINKEL

RAYMOND B. McCLENON

HORACE S. UHLER

THE AMERICAN MATHEMATICAL MONTHLY, FOUNDED IN 1894 BY BENJAMIN F. FINKEL, WAS
PUBLISHED BY HIM UNTIL 1913. FROM 1913 TO 1916 IT WAS OWNED AND PUBLISHED
BY REPRESENTATIVES OF FOURTEEN UNIVERSITIES AND COLLEGES
IN THE MIDDLE WEST

VOLUME XXVII, 1920
NUMBER 1, JANUARY

PUBLISHED BY THE ASSOCIATION
LANCASTER, PA., AND PROVIDENCE, R. I.

Entered at the Post Office at Lancaster, Pa., as Second Class Matter
PUBLISHED MONTHLY EXCEPT JULY AND AUGUST

\$3.00 a Year, Single Copies 35 cents, to Members;

\$4.00 a Year, Single Copies 50 cents, to Others

CONTENTS

The April Meeting of the Iowa Section	1
Some Extensions of the Work of Pappus and Steiner on Tangent Circles by Doctor T. H. WEAVER	2
Some vanishing Aggregates connected with Circulants by Professor W. H. METZLER	11
QUESTIONS AND DISCUSSIONS: "History of the Parallel Postulate" by Profes- sor FLORENCE P. LEWIS	15
RECENT PUBLICATIONS: Review by Professor A. S. GALE; Notes; Articles in Current Periodicals; American Doctoral Dissertations.....	23
Undergraduate Mathematics Clubs	28
PROBLEMS AND SOLUTIONS	31
NOTES AND NEWS	42

EDITORIAL CORRESPONDENCE AND BOOKS FOR REVIEW should be addressed to the
EDITOR-IN-CHIEF, R. C. ARCHIBALD, Brown University, Providence, R. I.

BUSINESS CORRESPONDENCE should be addressed to the SECRETARY-TREASURER of the Associa-
tion, W. D. CAIRNS, 27 King Street, Oberlin, Ohio.

Fused Mathematics

Analytic Geometry and Calculus

By FREDERICK S. WOODS and FREDERICK H. BAILEY
Massachusetts Institute of Technology

A one-volume two-year course for college classes. It is very strong in applied work and has a wealth of excellent problems. It does not teach calculus and analytic geometry as two separate subjects but calls for the processes of either as needed.

Introduction to the Elementary Functions

By RAYMOND B. McCLENON and WILLIAM J. RUSK
Grinnell College

A unified course covering the most important topics of trigonometry, analytic geometry, and elementary differential calculus. It avoids duplication. The problems are especially well selected; the course is not too extensive for its purpose; the presentation is inductive; the style is direct and formal.



GINN AND COMPANY

Boston
Atlanta

New York
Dallas

Chicago
Columbus

London
San Francisco